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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/501,756	02/10/2000	Wolfgang G. Eibach	UK999054	4338
25259 7590 02/26/2007 IBM CORPORATION 3039 CORNWALLIS RD. DEPT. T81 / B503, PO BOX 12195 REASEARCH TRIANGLE PARK, NC 27709			EXAMINER POLTORAK, PIOTR	
			ART UNIT 2134	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			NOTIFICATION DATE	
3 MONTHS			02/26/2007	
			DELIVERY MODE ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 02/26/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

RSWIPLAW@us.ibm.com

**Office Action Summary**

Application No.

09/501,756

Applicant(s)

EIBACH ET AL.

Examiner

Peter Poltorak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,7,8,10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8,10 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

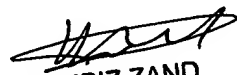
**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
KAMBIZ ZAND  
PRIMARY EXAMINER

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. In view of applicant remarks in the Appeal Brief filed on 11/16/06, PROSECUTION IS HEREBY REOPENED.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

2. Applicant's arguments with respect to claims 1-5, 7-8 and 10-11 are moot in view of the new ground(s) of rejection.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
4. Claims 1-5, 7-8 and 10-11 have been examined.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "network-connected home environment" and "devices within the home" recited in claims 7-8 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention and are rejected as failing to comply with the enablement requirement since the subject matter was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.
6. The original claim 4 recited a gateway that compared requests "for the performance of operation on the first processing unit with the access control list". The amended claim language submitted by applicant on 6/16/05 changed the limitation to: "all operation requests on the first data processing unit". This limitation is present in the current claim 4. The limitation suggests that that a gateway component compares requests present on the first data processing unit with access control list (ACL) and only permitting the requests that are permitted by the ACL. In addition to the contradiction in such a limitation (the requests on the first data processing unit are the requests that have already being permitted to pass to the first data processing unit") the specification does not disclose such a limitation nor clarify how such implementation would be possible.

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As mentioned above, the amended claim 4 (the amendment presented on 6/16/05) seems to provide contradicting statements, thus it is not understood. For purposes of further examination the phrase is treated in light of the original claim language "for the performance of operation on the first processing unit".

#### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

8. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by firewalls as illustrated by Pfleeger (Charles P. Pfleeger, "Security in computing", 2nd edition, 1996, ISBN: 0133374866).
9. Firewalls are secure gateway components, which controls communication across a communication link between a first and a second data processing units. Firewalls utilize a list of permitted communication in order to permit/execute only permitted communication (Pfleeger, pg. 426-434).

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10. Claim 10 is rejected under 35 U.S.C. 102(e) as being anticipated by Barkley (U.S. Patent No. 6202066).

Barkley discloses a network personal computers linked such that all share certain resources, such as a file server and discloses that such networks are commonly operated under control of an Such networks are commonly operated under control of an "operating system", which may include the capability to provide varying individuals with varying "permissions" with respect to objects stored on the file server. For example, Microsoft Corporation's "Windows NT" operating system provides this capability, by associating an "access control list" ("ACL") (this being an example of an "access control specification", as the latter term is used in the art) with each "object", e.g., with each controlled file or group of files, i.e., with a directory of controlled files. Windows NT allows various permissions to be associated by the ACL with individuals or groups of individuals, so that the access sought is permitted only if the user's identification matches the a user entry in the ACL or the user is a member of a group entry in the ACL, and the user or group entry is associated with permissions for the access sought (col. 1 lines 32-54).

11. This teaching reads on "storing a list of permitted operations which can be requested from the second data processing unit, comparing by a secure gateway component which controls communication across the communications link, requests to perform operations relating to secure resources on the first data processing unit with the list of permitted operations, and only executing the permitted operations" as required by the independent claim 10.

***Claim Rejections - 35 USC § 103***

12. Claims 7-8 and 10 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (U.S. Patent No. 6060994) in view of Pfleeger (Charles P. Pfleeger, "Security in computing", 2nd edition, 1996, ISBN: 0133374866).

Chen discloses an apparatus that comprises a second data processing unit (a monitoring device, object 6) connected to an external communications network (public network 5 e.g. Internet) such that an external communications network can be received from the external network (Object 50, Fig. 2) connected with a communication link with first data processing unit (client-side monitor/control server, Fig. 1, col. 2 lines 27-50). Chen also discloses security-critical devices (e.g. 1 and 2) within the home environment (objects 200, Fig. 2) managed the first data processing unit.

13. Although Chen does not explicitly disclose application programs running on the first data processing unit, the limitation if not inherent is at least implicit. Chen not only discloses that the first data processing unit comprises CPU and memory but also that it utilizes for communicating information between the second processing unit and security-critical devices (Fig. 1 and col. 3 lines 20-col. 4 line 52). Even if the first data processing unit did not include application programs running on the first data processing unit it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the application programs, an ordinary artisan would have been motivated to use them especially in light of the benefits of



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software applied in communicating devices as evidenced by the commercial success.

14. Chen does not disclose a gateway component for controlling communications across the link that limits the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation.

15. Discussed above firewalls, illustrated by Pfleeger, control communications across the link that limits the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate a gateway (such as firewalls disclosed by Pfleeger). One of ordinary skill in the art would have been motivated to perform such a modification in order to prevent a threat of an intruder penetrating the second data processing unit connected to security-critical devices.

16. Claims 1 and 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Nathanson (U.S. Patent No 6263268).

Nathanson teaches a system 10 incorporated in a vehicle (Fig. 1, col. 2 lines 31-33).

17. As per claims 1 and 10-11, Nathanson discloses a first data processing unit (15) connected to device control units of the vehicle (Fig. 1 and col. 2 lines 31-38 and col. 4 lines 28-33), a second data processing unit (25) connected to communications apparatus providing a wireless connection (35) to an external network (e.g. Internet,

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Fig. 1 and col. 3 lines 20-22 and col. 4 lines 4-16), such that operation requests can be received at the second data processing unit from the external network (Fig. 1, col. 3 lines 20-22 and col. 4 lines 4-16), a data communications link between the first and second data processing units (Fig. 1 and col. 2 lines 19-21).

Nathanson teach communication across the data communication link (col. 3 lines 1-16) and in col. 3 lines 1-30 discloses that a second data processing unit translates received commands from an external network to OBD protocol compatible commands, which corresponds to limiting passing of the operation request to only a predefined set of permitted operations would enable proper execution of external commands.

18. Claims 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nathanson (U.S. Patent No 6263268) in view of Coverdill (U.S. Patent No. 5890080).

Nathanson discloses limiting passing of the operation requests from the second data processing unit (B) to the vehicle's device control units via the first data processing unit (A) as discussed above. However, even though Nathanson explicitly discloses that the requests sent to first data processing unit enables the first data processing unit to communicate with the vehicle's device control units (e.g. col. 2 lines 31-48) Nathanson fails to teach the first data processing unit storing in an unmodifiable form a list of the predefined set of permitted operations that is compared with all operating requests received from the second processing unit before passing the permitted

operation request to respective ones of the device control units and to discard non-permitted operation.

However, as shown by Coverdill (USPN 5890080) storing in an unmodifiable form a list of the predefined set of permitted operations allows a processing unit to communicate with a particular vehicle's device control unit (e.g. col. 5 lines 5-15, lines 50-65, col. 8 line 64- col. 19. Since the first data processing unit in Nathanson's invention communicates with a plurality of vehicle's device control units, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate an unmodifiable form a list of the predefined set of permitted operations as disclosed by Coverdill given the benefit of forwarding the requests to a correct particular vehicle's device control unit.

19. The examiner points out that since the permitted set of operations would identify set of operations directed to a particular vehicle's device control unit, only the permitted operations requests (found in the list) would be passed to the set of the control units. Also, an ordinary artisan would readily recognize that any data (including operation requests) require (tight up) computing resources (execution time and storage space), and that keeping non-permitted instructions (requests) increase the risk of accidental execution. Thus, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to discard non-permitted operation requests given the benefit of saving unnecessary use of resources and preventing system's corruption.

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20. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nathanson (U.S. Patent No 6263268) in view of Elkin (U.S. Patent No. 6123174).

Nathanson's discloses the second data processing unit receiving requests from requestors directed towards mapping the request to requests compatible with the first data processing unit (col. 3 lines 4-16).

21. Nathanson does not teach one or more access control lists (ACL) defining which operation requests are permitted for particular requestors and compared with all operation requests in order to passing only permitted (for the respective requestors) and discarding non-permitted requests.

Elkin (USPN 6123174) discloses permitting operations of particular requestors using an ACL defining which operation requests are permitted for particular requestors (Elkin, Abstract, col. 18 line 61- col. 19 line 3, etc.). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to utilize an ACL defining which operation requests are permitted for particular requestors in order to utilize security levels to establish limits to limit actions of operators.

Although Nathanson in view of Elkin do not explicitly disclose discarding non-permitted operations, the examiner that in computer systems there are inherently only two options: saving or discarding data. An ordinary artisan would readily recognize that any data (including operation requests) require (tight up) computing resources (execution time and storage space), and that keeping non-permitted instructions (requests) increase the risk of accidental execution. Thus, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to

discard non-permitted operation requests given the benefit of saving unnecessary use of resources and preventing security.

22. Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nathanson (U.S. Patent No 6263268) in view of Coverdill (U.S. Patent No. 5890080) and in further view of Serughett (Marc Serughett, "OSEK: a super-small kernel for deeply embedded applications?", 1999).

Nathanson in view of Coverdill teach the first data processing unit the gateway component implemented in a vehicle as discussed above.

Although Coverdill suggests implementation of SAE standards, Nathanson in view of Coverdill does not explicitly discuss details of the operating system implemented in the vehicle and as a result there is not disclosure of the first data processing unit and the gateway component running in the static operating system environment.

In its publication Serughett teaches the OSEK/VDX static operating system and discloses various benefits of OSEK.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to run the first data processing unit and the gateway component running the static operating system as taught by Serughett given the various benefit disclosed by Serughett: reliability, minimal resource usage, highly efficient scheduling, etc.

23. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nathanson (U.S. Patent No 6263268) in view of Elkin (U.S. Patent No. 6123174) and in further

view of Serughett (Marc Serughett, "OSEK: a super-small kernel for deeply embedded applications?", 1999).

Authentication of requestors against access control list have been discussed above in light of Nathanson in view of Elkin.

24. Nathanson in view of Elkin do not disclose implementation of RTOS.

Serughett, discussed regarding claim 3, discloses RTOS (OSKE/VDX) and provides motivation to combine (e.g. Serughett, pg. 26-27).

25. Claims 7-8 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Bassett (U.S. Patent No 5706191) in view of Richardson (U.S. Patent No 6427202). Bassett teach a first data processing unit (an appliance interface module, AIMS, 70-78) connected to one or more security critical resources (water heater 71, gas meter 50, etc.) and a second processing unit (controller 15, Fig. 1) connected to an external communications network (Fig. 6, col. 12 lines 41-57) such that operation request can be received from the external network (col. 12 lines 41-57) a data communication link between the first and second data processing units (wiring system 20, Fig. 1, col. 5 lines 25-27), wherein the first and second data processing units and the link between them are implemented within a network-connected home environment (Fig. 1), and the security-critical resources include security-critical devices within the home which are managed by application programs running on the first data processing unit (Fig. 15, col. 9 lines 29-34 and line 51-67). Bassett does not explicitly name a gateway component for controlling communications across the link but (see, col. 14 lines 25-31) it is clear that some

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kind of gateway component (e.g. a processor) is present in Bassett' invention in order to enable communication between the external network and the first data processing unit.

Bassett does not teach the gateway component limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation.

Richardson teaches a gateway limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation (col. 5 lines 49-59).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement limiting the operations which can be performed at the first data processing unit in response to requests from the second processing unit to only a predefined set of permitted operation given the benefit of increased security.

26. As per claim 8 Bassett in view of Richardson do not teach that the external network is the Internet. However, utilizing Internet as an external network is an obvious variation that is well known in the art. One would have been motivated to use them especially in light of the benefits of Internet as evidenced by Internet commercial success.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

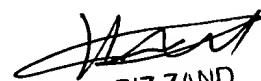
Spaur (U.S. Patent No. 5732074),


Schaller (U.S. Patent No. 5365436),  
Berra (U.S. Patent No. 5787367),  
Coverdill (U.S. Patent No. 5890080),  
Wallace (U.S. Patent No. 5938708),  
Cluts (U.S. Pub. No. 2004/0153656).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571) 272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
KAMBIZ ZAND  
PRIMARY EXAMINER

  
2/16/07